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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/643,216

08/19/2003

Hideo Yoshihara

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11/17/2006

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EXAMINER

CRENSHAW, MARVIN P

ART UNIT

PAPER NUMBER

2854

DATE MAILED: 11/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/643,216

Applicant(s)

YOSHIHARA ET AL.

Examiner

Marvin P. Crenshaw

Art Unit

2854

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 - 6 and 15 - 19 is/are rejected.
- 7) ☒ Claim(s) 7 - 14 and 20 - 25 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 8/19/2003. 12/02/05 & 08/04/06. MRU
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Allowable Subject Matter

Claims 7 – 14 and 20 – 25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance:

With respect to claims 7 and 20, the prior art does not teach or render obvious the total combination as claimed including the image forming device further comprising a second fan, wherein the first surface of the main casing is formed with a second exhaust outlet and the second fan is disposed in confrontation with the second exhaust outlet of the main casing for exhausting air from the main casing.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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Claims 1, 3, 5, 6, 15, 16, 18 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 10-143053.

JP 10-143053 teaches an image forming device (Fig. 1) comprising a main casing (Fig. 1, 2) having a first surface (70) and a second surface (74) opposing the first surface, a processing unit (30) that is detachably mounted to the main casing and that forms images on a recording medium, a first power source circuit board (80) disposed inside the main casing, the first power source circuit board outputting a drive voltage to the processing unit and a second power source circuit board (83) disposed inside the main casing, the second power source circuit board outputting a drive voltage a higher voltage than the drive voltage outputted by the power source circuit board (See paragraph 0022), wherein the components of the power source circuit board generate larger amount of heat than the second power source circuit board (See paragraph 0022), the first surface (70) outlet exhausting the first formed with a first exhaust outlet (71) from the main casing and power source circuit board (Fig. 2, 80) disposed downstream of the second power source circuit board passage direction which air passes through the main casing and is discharged through the first exhaust outlet.

With respect to claim 3, JP 10-143053 teaches the image forming device according to claim wherein the second power source circuit board (83) is a high-voltage power source circuit board.

With respect to claim 5, JP 10-143053 teaches the image forming device (Fig. 1) further comprising a drive motor (See paragraph 0011) that generates a driving force, wherein the second surface (Fig. 1) of the main casing formed with an intake hole

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through which air is supplied into the main casing, the air flowing over the first power source circuit board and being exhausted through the first exhaust outlet, the drive motor (See paragraph 0011) being disposed near the intake hole. Since the drive motor is in the device it can be considered "near".

With respect to claim 6, JP 10-143053 teaches the image forming device further comprising a first fan (72) disposed in confrontation with the first exhaust outlet (71) for exhausting air from the main casing.

With respect to claim 15, JP 10-143053 teaches an image forming device (Fig. 1) comprising main casing (Fig. 1, 2) having first surface and second surface opposing the first surface processing unit that detachably mounted in the main casing and that forms images on a recording medium and power source circuit board (80) disposed inside the main casing outputting drive voltage to drive the processing unit (30), wherein the first surface (Fig. 1) of the main casing formed first exhaust outlet for exhausting air from the main casing and the power source circuit board is disposed near the first exhaust outlet.

With respect to claim 16, JP 10-143053 teaches the image forming device (Fig. 1) further comprising a high-voltage power source circuit board (83) disposed below the processing unit (30), high-voltage power source circuit board outputting drive voltage higher voltage than the drive voltage outputted by the power source circuit board, wherein the power source circuit board (Fig. 2) positioned closer the first exhaust outlet than high-voltage power source circuit board, and the components of the power source circuit board generate greater amount of heat than the high-voltage power source circuit board.

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The high voltage power source would inherently create more heat since it is handling a larger amount of energy.

With respect to claim 18, JP 10-143053 teaches the image forming device (Fig. 1) further comprising a drive motor (See paragraph 0011) that generates a driving force, wherein the second surface (Fig. 1) of the main casing formed with an intake hole through which air is supplied into the main casing, the air flowing over the first power source circuit board and being exhausted through the first exhaust outlet, the drive motor (See paragraph 0011) being disposed near the intake hole.

With respect to claim 19, JP 10-143053 teaches the image forming device (Fig. 2) further comprising first fan (72) disposed in confrontation with the first exhaust outlet (71) for exhausting from the main casing.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 4 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 10-143053 in view of JP 2002-189320.

JP 10-143053 teaches all that is claimed, as discussed in the above rejection of claims 1 – 3, 6 and 15, 16 and 19, except the first power source circuit board comprising a transformer and a regulator and heat dissipating plates.

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JP 2002-189320 teaches an image forming device (Fig. 2) wherein the components of the first power source circuit board (80) include at least one of a transformer and a regulator (See paragraphs 0028 and 0030) and wherein the first power source circuit board has heat dissipating plates that dissipate heat generated by the components the first power source circuit board, the heat dissipating plates being disposed such that a largest surface of each heat dissipating plate disposed along the air passage direction (See paragraphs 0028 to 0030).

It would have been obvious to modify JP 10-143053 to have a first power source circuit board comprising a transformer and a regulator and heat dissipating plates as taught by JP 2002-189320 to provide an advantageous means for releasing the heat from the circuit board.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marvin P. Crenshaw whose telephone number is (571) 272-2158. The examiner can normally be reached on Monday - Thursday 7:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on (571) 272-2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


MPC
November 13, 2006


Daniel J. Colilla
Primary Examiner
Art Unit 2854